



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF RESEARCH AND DEVELOPMENT

May 23, 2012

Stephanie R. Timmermeyer  
Director, Regulatory Affairs  
Chesapeake Energy Corporation  
P.O. Box 18496  
Oklahoma City, OK 73154-0496

Re: Horizontal Drilling

Dear Ms. Timmermeyer:

Thank you for your letter of April 11, 2012 regarding the prospective case study we are in the process of planning in cooperation with Chesapeake Energy Corporation. It is my understanding discussions on the topic of ground water monitoring wells have been progressing well, and it appears we are now in agreement on the issues raised in your letter.

The Environmental Protection Agency (EPA) believes that our monitoring wells, which are to be placed nearest the production gas well, must be able to detect a release originating near the wellbore within 6 months of the release, based on the ground water flow velocity. EPA agrees that should the hydrogeologic characterization data - which have not yet been gathered - sufficiently demonstrate that the ground water velocity at this site will transport constituents released near the wellbore to off-pad monitoring wells within that time frame, no under pad construction of angle-drilled or horizontal monitoring wells will be necessary.

However, should the gradient in this area be relatively flat, and the ground water velocity not be sufficient to meet that goal, it is our understanding, that Chesapeake will allow angle-drilled or horizontal wells to be installed under the pad, with the stipulation that they come no closer than 30 feet of the gas well. Reaching this agreement represents a significant achievement and is based on discussions between Mr. Michael Overbay and Mr. Steven Acree of EPA with Mr. Chris Hill of Chesapeake on Tuesday, May 1, 2012,

With regard to your request for a monitoring well plugging and abandonment plan, we have tasked our support contractor with preparing a generalized plan based on the current conceptual monitoring well designs and regulatory requirements of the Oklahoma Water Resources Board. However, once the hydrogeologic site characterization data have been collected, the monitoring well designs will need to be modified to reflect actual site conditions. Subsequently, once installation has been completed, the well plugging and abandonment plan will also be modified to reflect actual well construction details.

The issue related to the assumption of liability for any damages to the Chesapeake gas well, or to the environment, caused by the installation and use of the monitoring wells by EPA and its contractors, has been referred to the EPA Office of General Counsel (EPA OGC) for consideration. EPA OGC has

confirmed that the federal government, including the EPA, is "self-insured," and that all claims are subject to payment under the Federal Tort Claims Act, 28 U.S.C. § 2671, *et seq.* Also, once a contract is awarded to a drilling contractor we can provide details of their required liability insurance. If you would like, we can set up a conference call with OGC to discuss this further.

Finally, while we understand and appreciate your request to include your concerns regarding the use of non-vertical monitoring wells (should they be used) in the final study report, we cannot commit to including such specific information in a report that will not be finalized for approximately 30 months. However, should it be necessary to use such wells, we will discuss this with you as the final report is being developed.

I do hope these responses adequately address Chesapeake's remaining concerns on these issues. We will provide you additional information on the plugging and abandonment plan as it becomes available.

I will contact you next week to confirm resolution of these issues and to finalize our agreement to allow us to begin our field work. If Chesapeake provides site characterization work, then we expect to get out into the field by July 11, 2012. If EPA provides the site characterization work, we will start the contracts necessary to support that effort now to enable us to start in the field by July 23. In either case, we estimate that the field work will require two weeks, so the pad construction date may be affected.

Thank you in advance for your consideration. We look forward to working with you and to begin this important case study. Feel free to contact me anytime at (202) 564-7504 or (202) 570-6023.

Sincerely,

A handwritten signature in dark ink, appearing to read "E. Ramona Trovato". The signature is fluid and cursive, with a large, stylized initial "E" and "T".

E. Ramona Trovato

Principal Deputy Assistant Administrator